"And the pale health-seeker findeth there
The wine of life in its pleasant air."

The Wonderful Black Hills

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ASCENDING BALD MOUNTAIN, NEAR DEADWOOD, F E. & M. V. R. R.

THIS CHARMING LITTLE BOOK

IS IN THE MAIN A REPRINT OF AN ARTICLE ENTITLED

"A DRIVE THROUGH THE BLACK HILLS,"

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IN THE . . .

. . . BLACK HILLS

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IT is five o'clock in the morning as we pass through Buffalo Gap and swing up Fall River Cañon. The walls of the cañon are steep; the sky is like a gray awning stretched from cliff to cliff. The old moon, worn to a thin crescent, drops an occasional spangle into the river, which goes tumbling from us first on one side of the track, then on the other. Every now and then the noise of the locomotive is drowned by the roar of a waterfall, a roar which is half echo, and the falls assume strange breadths and elongations in the half-light. We leave a trail of curling white smoke behind us, which pulls itself out and hangs like mist over the water. The atmosphere is peculiarly clear. Gradually the sky turns a whiter gray, and seems to rise slowly and majestically beyond the reach of the crags; things begin to assume individual forms; the pines loosen themselves from the black mass of the walls; the bowlders assert their curves; the river is turning a nacreous pink on account of a great blush that has risen from the east, and swallowed the pale slip of the old moon.

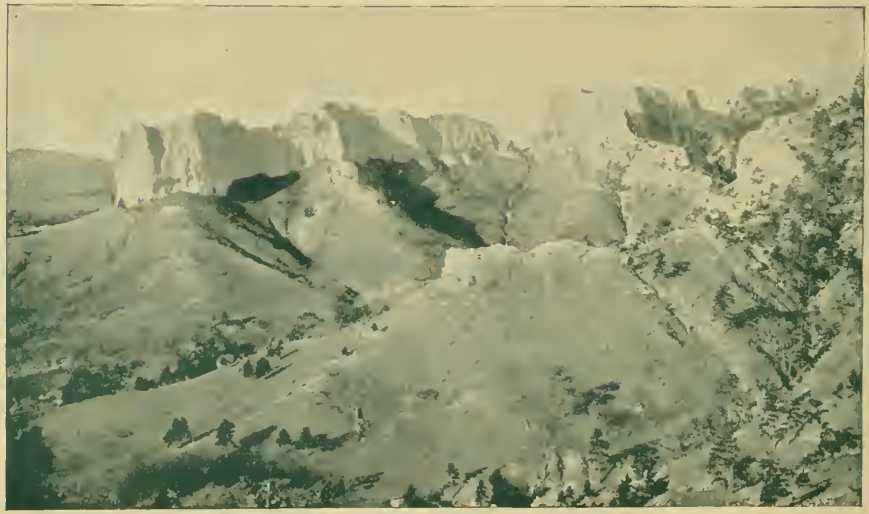
VIEW UP COLD CREEK CANON, NEAR HOT SPRINGS.

As we ascend, the sky steadily rises and broadens above us. Then the pink blush is evaporated by a luminous blue, and the world seems suddenly to have broken into color. We shoot a long, shrill whistle at a little white town at the head of the cañon, and slacken our pace. We have reached the Minnekahta (Hot) Springs. We are at the threshold of the Hills.

History dawned on these Hills only eighteen years ago. The first gleam of light came with the order sent General Custer by General Sheridan, then of the department of the Missouri, "to organize an expedition at Fort Abraham Lincoln, Dakota Territory, for the purpose of reconnoitering a route from that post to Bare Butte in the Black Hills, and exploring the country south, southeast, and southwest of that point, and to return within sixty days from the time of his departure from it."

The numerous explorations into the great Northwest since the days of Lewis and Clark had confined themselves for the most part to the valley of the Missouri and its branches. The Canadian voyageur and other strange variants of the human species incident to the fur trade were, of course, acquainted with the plains beyond the river, and knew the mountains that shoot out of them like a rugged black island out of a yellow sea. But their career represents little more than a fascinating chapter in a long story of adventure. They left many pretty traditions, and a French name on the creeks where they had stopped and traded; then, as it were, the waters closed over their passage.

In 1855, some twenty years before Custer's detail, General Harney had skirted the Hills with a view of establishing a route to the far west, and determining an easy way between the various frontier military posts. This expedition was continued the following year by General



BUTTES NEAR FORT ROBINSON, NORTH NEBRASKA.

Warren, under whom it assumed something of a scientific character. They entered the Hills by the east branch of Beaver Creek, and pushed as far north as Inyan Kara. Here their progress was opposed by a large band of Sioux buffalo herders, and they were forced to retrace their steps. The expedition thus interrupted, and which would have been resumed but for the outbreak of the civil war, resulted in a map of the Black Hills and several scientific papers touching the geology of the country.

But Custer's expedition was epoch-making. Its epoch-making feature was the presence among his party of a number of miners, who availed themselves of every opportunity during the rapid march to prospect for gold. It is commonly believed in the Hills that small parties of gold-seekers had penetrated the country long before 1874. It is said that the Indians who came down to trade at the frontier posts in a far earlier day frequently brought gold-dust with them, and that they fully understood its value. This gold, and especially the comprehension of its worth, no doubt proved that they had had some intercourse with these early miners; and the fact that these miners should never have come down from the Hills to tell their own story, throws a light on the character of the intercourse. These legends are all substantiated by prospect holes and ruined cabins, not to be otherwise accounted for.

On Lookout Mountain, in the northern Hills, a table was discovered some five years ago, bearing the date 1833, and the names of seven miners and their history laconically written by the last survivor of the party. One side of the stone says: "Came to the Hills in 1833, seven of us, all dead but me!" And the other side: "Got all the gold we could carry, our ponies all got by the Indians. I have lost my gun and nothing to eat and Indians hunting me."

SCENE NEAR CUSTER, S. D.

There is the story of Father de Smet, too, a Jesuit missionary, who went out to the Indians of the far west as early as 1825. The Father seems to have written nothing on the subject, and word of mouth is easily distorted. But there is at least one reliable quotation from him which is to be found in a letter from General Sheridan to General Sherman, written in 1875. "While living with the Sioux Indians he (de Smet) was shown by them nuggets of gold, which they informed him had been obtained at different points in the Black Hills. . . . On his representation that such yellow metal was of the greatest value, they told him that they knew where there was a mountain of it. Subsequent investigation, however, proved that the mountain of gold was nothing more than a formation of yellow mica, such as may be found in the above described country."

However all this may be, it was General Custer's report which solidified a legend into a fact, and through its consequences brought about the purchase of the Hills from the Sioux. The tenor of this report, considering its subject, could scarcely be called enthusiastic. He speaks of his faith in a "very even if not a very rich distribution of gold throughout entire valleys." There was no discovery of gold deposits in quartz; no large nuggets were found; still he believed that "while the miner may not in one panful of earth find nuggets of large size or deposits of astonishing richness, to be followed by days and weeks of unrewarded labor, he may reasonably expect in certain localities to realize from every panful of earth a handsome return for his labor." Professor Newman tells us that at that time the presence of gold in the Hills, at least in any quantity, was strongly denied by high scientific authority, on the ground of their supposed general structure, and also by many members of Custer's expedition,

who would be supposed to have had the opportunity of practically testing the question. But gold is a word without limitations. Gold had been found, and that statement brought with it a glare which blinded people to every attenuating consideration. The year 1874 represented a pause in the history of gold discovery, and the verbal accounts of the new El Dorado, accounts which, however exaggerated, could this time at least rest upon an official document, fell like pregnant germs on the popular fancy. The word traveled through the frontier settlements like the breath of fever, inflating and distorting every imagination. It sent an electric shock through that great floating mass, that heterogeneous compound that constitutes the world of gold-hunters. They knew the exact character of the dangers incident to an encroachment upon Indian rights; they knew that the Government, in compliance with the treaty made with the Sioux in 1868, was bound to protect the latter against an invasion of their permanent reservation by white men. Nevertheless the winter of 1874–5 found several parties in the Hills, among others one consisting of the prospectors who had accompanied Custer, while miners from Montana, Colorado, and even California, began to pour into the little settlements outside of the foothills.

The Government was soon compelled to take cognizance of the situation. Troops were stationed at all accessible points leading to the Hills, and a company of cavalry under Captain Mix, then commanding officer at Fort Laramie, was ordered into the Hills to remove any parties of miners that might be found there. The consequences of their removal only aggravated matters. The parties brought down by the troops became the objects of the most intense interest. Their stories were listened to with avidity. Interviews with them were panned out

for every newspaper throughout the west. The necessity of eluding the military lent a certain gusto to the new undertakings. Parties driven out in one direction reappeared in another. Their number was rapidly multiplying. They concentrated at certain points, and showed a disposition to resist the troops as well as the Indians, should the occasion demand it.

Then the inevitable occurred. It was far easier for the Government to buy off the Indians than to hold the country for them. What the sale of the Black Hills represented in the Indian problem could scarcely be seriously considered. That the Indians were to be allured from their well-timbered heights and fertile valleys to barren plains which could only support them so long as the buffalo lasted; that then, ignorant of the primary labors of civilization, they would be called upon to solve its problems, to turn a waste into fertility by improved methods of agriculture; that an indulgent Government would alternately feed them with a spoon that they might become self-supporting, or starve them into revolt that they might learn submission; that the proposed system of reservation and ration would inevitably come to be a bribe to the national sentimentality—conscience money to the idealism of the nation which rejects the brutal fact that might is right—were points of view which it concerned no one to adopt.

By order of President Grant, secret inquiries were made to ascertain the feelings of the Indians concerning the relinquishment of the Black Hills. The result of these inquiries went to prove that the Indians were divided among themselves; that some were willing to part with the country provided an enormous price could be obtained for it, and that others, the young generation, refused to consider the question at all. In June of 1875, a commission was appointed by the Secretary of the Interior to hold a grand council with the Sioux in order to

CHIEF "BIG TURKEY" AND SOME OF THE TRIBE.

secure to the citizens of the United States the right to mine in the Black Hills. The council met on the twentieth day of September, but nothing was accomplished, as the Indians had arrived at no understanding among themselves. Four meetings followed, in the course of which, Red Dog, Red Cloud, Spotted Tail, Black Coal, Dead Eyes, and several species of Bears and Wolves, informed the commissioners, with all the flowers of rhetoric, that they would sell only that portion of the Black Hills which contained gold, that the lower valleys and foothills were their fertile pastures and that they did not choose to part with them. For the gold-bearing central Hills they demanded the sum of $70,000,000, besides support for seven generations to come.

In 1876 another commission was appointed. In the time which intervened between the two commissions the Indians had come to realize that they were scarcely the arbiters of the pending question, and they signed a treaty at Red Cloud Agency ceding the entire area of the Black Hills girdled by the north and south forks of the Cheyenne River. This treaty, wherein the Government agreed to furnish the Indians with supplies until they should become self-supporting, and in a vague way to "provide all necessary aid to assist the said Indian in the work of civilization," without further mention of the $70,000,000, was ratified by Congress on the twenty-eighth of February, 1877.

The Hills were thrown open to white settlement. The trails that the mountain sheep had cut along the hill-sides up from the valleys, and which the Indians had worn into paths, were broadened into wagon roads, and years later the Fremont, Elkhorn & Missouri Valley Railroad had laid its rails along the road from the south and penetrated the Hills.

SCENE ON F. E. & M. V. R. R.

Minnekahta (Hot) Springs, October First.—It is a day all of light, one of those dazzling days of Indian summer when one can find stars in the atmosphere. The season is over, and the hotels begin to look like dance halls by daylight. The towns supported by tourists, agriculture, or stock interests could only come with the reflux from the mining districts, and are consequently of a more recent date.

Minnekahta (Hot) Springs is five years old. The rheumatic ranchman of early days, or the cowboy who first took a run this way to soothe the exasperation of the "Texas itch," took his bath in an Indian tub hewn out of stone in the shape of a moccasin. This tub was the nucleus of a little thermal town of tepees, which soon melted away before a claim cabin; and this claim cabin, constituting to itself what might be called the old quarter, has been put on wheels and unceremoniously trotted off to the far end of the town to make way for the stone hotel, at which we are stopping. There are a few parties here who, like ourselves, are about to take a driving tour; others who, relieved of a slight touch of rheumatism, linger on to follow up their cure with the tonic of long walks.

One must not for a moment assume that only invalids are attracted here. On the contrary, each spring the place is literally overrun—taken possession of by pleasure-seekers and recreation "fiends," who fill up hotels, exhaust livery barns, tramp over the mountains, through the glens, explore the caverns, swim in the magnificent plunge bath, from morn till night, and wind up the day by "tripping the light fantastic" till midnight. True, the rheumatics who take the baths are soon limbered up, and participate in the recreations of the pleasure-seekers, and none among the throng are so grateful as these to "Mother Earth" for her fountains of

EXTERIOR VIEW OF PLUNGE BATH, HOT SPRINGS, S. D.

health, or the beautiful place and superb climate in which she chose to establish her sanitarium. Here are both health and pleasure.

The baths are supplied by four main springs here, and one large and several smaller springs at the Catholicon, one and one-half miles east, the largest of which goes to form a luxurious plunge 200x50 feet. The others flow into the tiled and marble tubs of an excellently appointed sanitarium. This water that caresses you deliciously with its tiny bubbles rises out of the ground at a temperature of ninety-six degrees Fahrenheit, requiring neither exposure to the air nor the addition of cold water. The analysis of the Hot Springs of Minnekahta, made by Professor Mariner of Chicago, is as follows:—

	Grains per Gallon.
Silica,	2.464
Calcium Carbonate,	16.352
Magnesium Carbonate,	4.320
Potassium and Sodium Sulphate,	25.620
Sodium and Potassium Chloride,	13.790
Peroxyd of Iron, a trace.	-----
Total,	62.546

It is eminently a rheumatism cure, though numerous other virtues have also been ascribed to it, virtues which could be partly attributed to the invigorating air of the Hills. These four main springs, with eight or ten small ones, come together and form Fall River, which flows about ten miles in its own bed, depositing its mineral so gradually, losing so little of its heat that the frogs find heart to sing on its banks with the thermometer at twenty degrees below zero.

INTERIOR VIEW OF PLUNGE BATH, HOT SPRINGS, S. D.

The history of Minnekahta has naturally produced much that might be called in miner phrase, "spring excitement." There has been prospecting for and locating of springs in this region just as there has been prospecting for gold and tin further north. So far nothing has proved worthy of a boom except a group of springs on the old Sidney stage road about twelve miles from Minnekahta. Rising within a stone's throw of each other, they are proclaimed to possess distinct medicinal qualities. The temperature is between fifty and sixty degrees. These Cascade Springs converge and form the Cascade Creek, which flows over a bed of turquoise and malachite tints into the Cheyenne. The springs are the property of a syndicate, which dreams of seeing a great health and pleasure resort rise, as Minnekahta has, out of the beneficent vapor of the water.

All this southern section of the country is rich in a hard sandstone, white and dull pink, which promises substantial, sunny towns to the dark laps of the Hills. The great belt of gypsum, too, has already given rise to a few little stuccoed houses that crop out of the abrupt side of the heights, with a pretty Italian effect. The vegetation here consists of a variant of the spruce, small sturdy trees planting themselves resolutely among the rocks, and thriving there in a way calculated to encourage every form of human endeavor. They grow everywhere, down the rocky sides of the cañons, along the capricious angles of the cliffs; they crowd each other off the narrow foothold of a needle, and seem almost human with intention. Here and there they step up or down in deference to a great rib of marble protruding from the hillside. They lend a sombre charm to a landscape which without them would produce an impression of ragged dreariness, and the air seems purer for their wholesome, vigorous smell.

VIEW ON LINE OF F. F. & M. V. R. R.

From Hot Springs we turn our horses' heads toward Custer. We drive under a sky that seems to twinkle with electric flashes, and over a rolling prairie covered with a yellow frizzle of buffalo grass. We have left the trees. As we rise over the yellow swell, distant hills bulge up from various points of the horizon. They are of a black blue, the blue of the California plum, and the haze that the light throws on them is like the bloom of the fruit. A thin cloud before the sun would turn them to an intense black. From that circumstance they acquired their name.

Our driver entertains us with stories bearing upon the treachery of the Indian and the simplicity of the tenderfoot. He was a stage driver in early days, and his talk affords us the essentially western luxury of learning history from one of the makers thereof. He confesses that the extraordinary development of the country surprised no one more than it did him. Who could have imagined it? When the Fremont, Elkhorn & Missouri Valley Railroad Company built their road to the Hills, he thought "that them folks was sett'n' a b'ar trap fur ter ketch a bedbug;" "but I reckon they ketched a b'ar," he adds, willing to do full justice to superior foresight.

At the end of two hours we reach Wind Cave, where we make a halt, and the next five hours are spent in fairy land. We are requested to slip into overalls, and thus metamorphosed, we let ourselves down a hole into which we disappear through an exhalation of cold wind. This cave is in the limestone formation, gnawed out by the streams that sink there. It has been explored for a distance of two miles and a half only, and the passage is as yet a very narrow one. (Since this was written sixty-five miles and seventy-six rooms have been

PHANTOM RIDGE, SOUTH DAKOTA.

explored in this cave.) Our guide disappears every minute like an eel through a hole; we shout to him, and from the other side of a rock partition he instructs us to "keep right on a-millin'." So we "mill" right along; that is, we do much climbing with hands and knees, much tobogganing and some groveling.

This exceedingly varied locomotion is seven or eight times interrupted by the chambers on our way. Some of these seem to be hung in petrified cobwebs, through the meshes of which we can insert our tapers and awaken exquisite colors, pinks and reds for the most part. There are vestibules that seem to be ceiled and walled with orange buds, and others in which these buds have burst into capricious blossoms that look like tiny Japanese fireworks petrified into diamond or turned into snow, and all so delicate that they are shivered and disappear at the slightest touch. There are long ribbons of stalactite formation, damp and of a fishy pink, that creep about the passages like the tentacles of some enormous sepia. There are great broken geodes half embedded in the wall, disclosing rows of crystals, like mouths opened in a petrified laugh; short stalactites and stalagmites in process of formation, holding a drop of water like a pearl at the point of their needles.

The box formation is the predominant feature of the cave, so far as it has been explored,—intricate mazes of pigeon holes, from three to ten inches deep, divided and subdivided by infinite partitions, forming niches, miniature shrines, pagodas of fairylike architecture, which glow with a pink and red light as we thrust our tapers into them. None of the chambers are very large; they are even comparatively low. They produce no impression of grandeur or awe. Their beauty is the beauty of detail, marvelously exquisite. As the cave is said to

extend thirteen miles in one direction alone, the starlit halls and the cathedral naves are no doubt merely standing in wait. (Since the foregoing was written the explorations have been extended vastly and with most surprising results.)

The old Custer stage road, as we find it again after leaving the cave, leads up through a region so totally different from that which we have left behind us, that it would seem as though the world had been transformed during the five hours we spent under ground. We drive through an arroyo, enclosed between rugged, gray palisades, surmounted by pines which are extremely tall and rich in color. The hollow of the arroyo is filled with the quivering gold of the cottonwood. Every now and then the eye is caught and held by the intense tone of a scarlet vine flung around the trunk of a tree or creeping among mosses, over gray rocks. The walls of the cañon broaden and rise, the palisades disappear, and we drive on for several miles between thickly wooded parks strangely wild and lonely. The hush of the wood is occasionally broken by a startled deer that goes bounding from us, and loses himself in the colonnade of pines. Chipmonks with erect tails skim like exhalations along the fallen trees, and flights of belated bluebirds, that seem unusually blue, rise with a whir and disappear in the velvet tops of the pines.

As we emerge onto a height, we are suddenly confronted by imposing masses of granite bearing the eccentric name of Calamity Jane Peaks. These masses are the southern portals of the granite region of the Hills. It is difficult to translate into words the effect which they produce. They are massive enough to create the impression of squarely seated, immova-

ble weight, and high enough to be bold. The vegetation at their base is luxuriant, and still they have expanse enough of bare gray rock to be dreary.

The Jane of the terrible epithet who gave her name to these heights, was the first to ascend them, and is said to have celebrated the event by tossing up her cap and riddling it with bullets in full view of the troops below. This extraordinary product of frontierism made her appearance in the Hills in 1875, with the troops accompanying Professor Jenney's scientific expedition. The people of Custer remember her in buckskins, six shooter in belt, riding among the soldiers and answering the roll call to the mystification of the officers. Her prowesses and misdeeds filled this wild region with anecdotes. After having carried a woman's caprices through all the most reckless phases of a man's life, she fell a victim to the tender passion, and is now leading an existence of conjugal felicity somewhere in Montana. "Of woman flesh and horse flesh," the Arabs say, "one can predict nothing."

Pushing on through Custer, and leaving the stage road, we find ourselves again immersed in a forest of wonderful beauty. The ground is covered with a thick carpet of K'neck-k'neck, green with the green of the holly, and bearing berries like a thick sprinkling of coral beads. Here we find spruce, some fir, clumps of willows of a feathery Japanesque effect, and a young growth of birch and aspen—a tangle of wire limbs from which the round yellow leaves dangle like gold coins to be whiffed off by the first cold winds in little dancing oblique showers. Great granite masses hump their backs above the trees. This beautiful wood is called Custer Park. The center of the park forms a bed of about ten acres, enclosed between granite palisades, which is to be filled, I believe, and converted into a lake. At the far end from Cus-

ter, and overlooking what is known as Sunday Gulch, the granite piles rise to a height of three and four hundred feet. They are broad and massive, or cut into saw teeth and slim needles of a most toppling effect. Down the almost vertical cañon of which these are the walls, comes what would seem like a cataract of boulders suddenly stopped in its course. Beneath them is a thin stream fighting its way to the valley. Each step down these boulders changes the scene as if by magic. The needles present different shapes and poses at every angle; they seem to rise, bend and execute all manner of ponderous movements. In a far distance of peaceful blue, the Castle Creek divide is stretched across the narrow horizon, restful and dreamy in contrast with the tormented foreground.

We return to Custer by the same road, which we scarcely recognize. While we were in the cañon a snow-storm has swept the forest and transformed it. It is not earnest snow, however; the flakes are small and light. They have merely thrown a sheen upon the pines and powdered the willows. The sky is gray but very soft. The sun looks down upon us like a luminous wafer. This is the first of those mock storms of early October that brush the sky, and leave it pure and blue until Christmas.

Custer City lies in the valley of the French Creek, at a short distance from the point where the first discovery of gold was made by the prospectors accompanying Custer's expedition. When the discovery was made known, all trails and roads converged here, the heaviest influx pouring in through those from the south, by way of the Niobrara River, Sidney and Cheyenne. In June of 1875, as soon as General Custer had left the Hills, an "outfit," with a hundred and sixty-six men, pitched their camp on the site now occupied by Custer City,

where they found small parties of miners struggling with the hygienic problem of wild meats "straight." They combined forces and constituted themselves a town company; measured off one square mile with a tape line; christened this square mile "Stonewall," in an impulse of enthusiasm for the great southerner, and sold a number of lots. This was in July. In the same month, General Crook, with a small force of cavalry, arrived in the valley and issued a proclamation requesting the miners to leave the Hills before the fifteenth of August, under pain of being captured and removed by the troops. On the tenth of August, twelve hundred miners held a meeting, the character of which proved their determination to only partially obey the requirements of the Government proclamation. They declared the proceedings of the first town company to be null, made a new survey of the town plat, substituted the name of Custer for that of Stonewall, divided the plat into twelve hundred lots, numbered them, and distributed them among themselves by drawing the numbers from a hat. On the fifteenth, all were led out by the military, with the exception of seven, who were permitted by General Crook to remain and guard the property. Captain Pollock succeeded Crook in the duty of protecting the Hills from the miners, but on the day of his removal by order of the Government, the miners flocked back and took possession of their town.

In the early spring of 1876, occurred one of those crises peculiar to the history of mining regions; one of those extraordinary panics known as a "stampede," which might do for a striking allegory representing the power of gold, if people were not surfeited with such allegories. There came a rumor of a rich gold find in the Deadwood Gulch; and the new little town of Custer was emptied as if by magic. In a few weeks only thirty people out of six thousand

SPECIMEN OF BUTTE FORMATION.

were left to pursue the work in the valley of the French Creek. The log houses of the stampeders furnished fuel for those who remained, and in this smoke, it would seem, disappeared much of what constitutes the character of a frontier mining camp.

Since the great exodus to the Deadwood Gulch, Custer has slowly but steadily grown. Its population today amounts to some nine hundred souls. As it stands now, trim and quiet in its smiling valley, it seems to have lost all memory of its hurdy-gurdy days, of the days when its atmosphere was all oxygen. It is shipping brick and lumber to all parts of the Hills, becoming a good market for the small grain produced throughout the valley,—a peaceful little town of green-shuttered homes, perched 5,640 feet above the sea, made accessible by railroad enterprise, and destined, I fancy, to suffer a grand invasion of tourists just as soon as its attractions of scenery and climate are well understood throughout the States that it looks down into.

Custer's nearest neighbor of importance is Hill City. The stage road that links the two places stretches itself in full view of the granite needles of the Harney range, through a landscape whose picturesqueness is an emphasis of that which marks the southern approach to Custer. We are to find the culmination of this beauty of stone and vegetation at Harney's Peak, and every turn in the road leading in that direction shifts the scene in crescendo. In Hill City one finds little that is distinctive; the same low structures, with little external indication of their use, drawn up in line along a central street and somewhat scattered about the lateral ones; the usual substantially built bank doing a flourishing business, a pair of gold scales on its counter, and the traditional six-shooter to preserve harmony in the minds of men. Although Hill City, like Custer, is situated in the most picturesque portion of the Hills, its future does

LOOKING UP NEVADA GULCH.

not lie entirely in the hands of tourists. As the center of the Harney Peak tin district, its history will no doubt be that of the Harney Peak Mining Company.

Though tin was discovered in the Black Hills as early as 1877, the knowledge of the discovery was not generally disseminated nor its importance well understood until six years later. This is not surprising when one considers that in some proportion or quality every known mineral has been found in the area of the Hills. In the black sand found with the gulch gold shipped to Argo from the Harney Peak region, Professor Pierce of the metallurgical laboratory of the Boston and Colorado Smelting Works, determined the presence of cassiterite. His discovery, announced to a gold-fevered community, produced, of course, no impression. In 1883 a citizen of Rapid City began to prospect for tin, and shipped samples of the ore to California for examination. These samples were assayed by Professor Blake, whose report on the subject, published in the "American Journal of Science," of September, 1883, brought about a closer examination of the tin veins by practical miners and geologists. Several companies were soon incorporated, the most prominent of which was the Etta of New York. This company, full of faith in the richness of the veins in the Harney Peak district, made great expenditures in acquiring most of the tin claims in that locality. An increase of capital soon became necessary, and the New York stockholders made propositions to certain English capitalists, among whom were Lord Thurlow, and the Baring-Gould brothers. The Harney Peak Tin Mining and Milling Company was the outgrowth of these successful negotiations.

The news of the discovery of tin in the Black Hills stirred, as was inevitable, questions of tariff and protection, and the new corporation became the butt of all forms of newspaper

HARNEY'S PEAK, NEAR CUSTER, S. D.

ferocities. Still this Harney Company, which owns the entire site of Hill City, nearly a thousand quartz claims, and four thousand acres of placer ground, does not seem to have grown weary of acquiring new claims. In regard to these mines and the attitude of the Company, one can hear, even within the walls of the foothills, the most bewildering pros and cons, not totally free perhaps from the taint of personal interests or individual politics; and accordingly "the veins contain nothing, and the developments of the Company are a blind," or then the blind has an opposite motive; "the Company is gradually getting everything under its control and working slowly towards a tremendous monopoly." The ore treated in California and New York is said to contain from two to four per cent tin. An average sample taken from the crushed and mixed bulk of ten tons proceeding from the fourteen principal groups of mines, and analyzed by Professors Fred and Arthur C. Claudet, assayers to the Bank of England, has been found to contain 2.94 per cent of metallic tin. The veins lie between clearly defined walls of slate.

The developments made by the Harney Peak Company consist in shafts from fifty to a hundred feet deep in the greater number of the mines, steam hoists, pumping and compressed-air machinery in the four principal properties, drifting, stoping, and some tunneling. The longest tunnel, 960 feet, is that of the Tenderfoot, situated between Custer and Hill City. A mill of two hundred and fifty tons daily capacity is now being constructed on Spring Creek near Hill City. The Addie Mine, into which we descended to a depth of three hundred feet, was resonant with the power drill, the muffled rumbling of the blasts, the click of the picks, every evidence of earnest work.

Harney Peak, October Ninth.—We are in reality only 8,200 feet above the sea, but we are on the pinnacle of the Black Hills, and as all things are relative, we seem to be standing on the summit of things, with the world rolling from us to the horizon in great circular waves. According to Professor Henry Newton, the geology of these hills is simply and generally as follows: Around a nucleal area of metamorphic slates and schists, containing masses of granite, the various members of the sedimentary series of rocks, the Potsdams, Carboniferous, Trias or Red Beds, Jura, Cretaceous, and Tertiary, lie in rudely concentric belts or zones of varying width, dipping on all sides away from the elevatory axis of the Hills. From the Hills outward the inclination of the beds gradually diminishes until all evidence of the elevation is lost in the usually rolling configuration of the Plains. Separated as they are by more than one hundred miles from the nearest spur or sub-range of the Rocky Mountains, they are a complete study in themselves. Exhibiting in the strata exposed and in the general character of the elevation most of the principal features of the geology of the Rocky Mountains, they are a geological epitome of the neighboring portions of that great range. It has elsewhere been said very graphically that the "central nucleus has been thrust up through the different sedimentary formations, much as one could thrust his fist up through the layers of a very large jelly cake." If the Hills were shorn of their timber, we could almost realize from the summit on which we stand that the bedding planes that dip from us are almost perpendicular. As it is, what we really see is a wilderness of wooded peaks encircled by a broad valley, the Red Valley, which the Indians call the Race Course, this in turn enclosed

by a wall of foot-hills. It is all curiously symmetrical—a castle of geologic dimensions, with domes and turrets and a broad moat within its ramparts. Among these domes and turrets, rise the innumerable streams that scar the mountain sides with cañons and gulches, and then disappear before reaching the valley wherever the limestone deposits open for them a subterranean passage.

Of the snow that fell a few days since, the sun has left but a delicate arabesque on the granite cap of this pinnacle. Double rows of enormous needles radiate from us to the foot of the mountain, like great causeways which the pines seem to be climbing in solemn, stargazing files. I can find no word luminous enough to qualify the atmosphere. It is literally of light, of that intense light which cheats distances and draws the horizons nearer together. We look through our eyelashes over the heads of mountains, and see the far-off plains and the snow-covered ranges of other States. Nebraska lies south of us, flat and yellow like a great field of ripe corn; Wyoming ends in an undulating line of blue, the Big-horn, touched here and there with a glint of snow. To the west we look into the accursed region of the Bad Lands, redeemed and transfigured by the glory of the sun into a broad plain of pure gold. Then there are the unidentified distances, the most beautiful of all; the vaporous blue country of dreams in which we loosen our fancies, and mentally roam without limit.

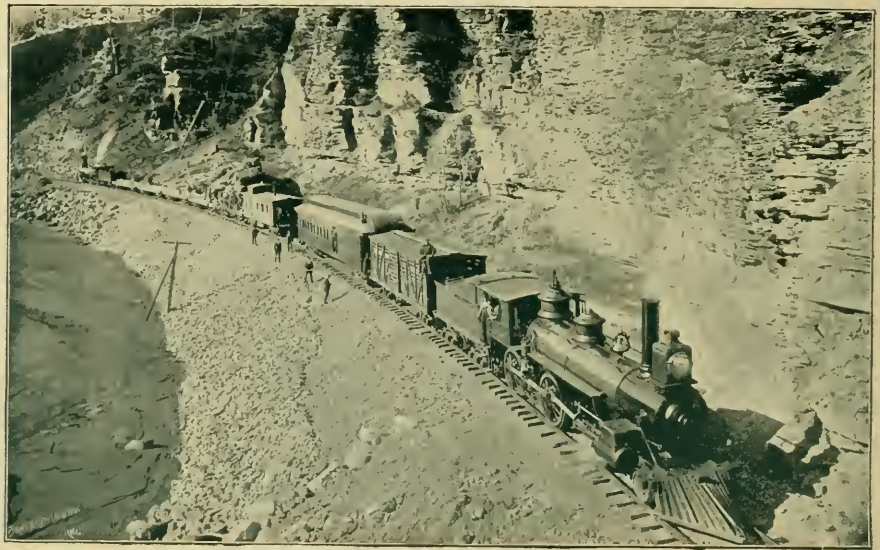
On our way down we go winding about the great causeways, from the heights of which, if there were anyone there to look at us, we would seem like a hurrying procession of ants. But we are sure of being entirely alone on the mountain. Our mountain-sheep trail

DEADWOOD GULCH. CENTRAL CITY IN DISTANCE.

loses itself constantly among the low-limbed spruce, under the moss, or around the huge piles of granite. There is something delicious in this loneliness and silence; not a sound but the forest sounds, which come to be other forms of stillness, a breath of wind in the trees, the trickling of a spring. We realize the grade of our trail as we reach the foot of the mountain. We have been less than two hours coming down a distance which it took us over three hours to ascend.

As we travel from Hill City to Deadwood, we leave the granites behind us. The deep cañons through which we pass are enclosed within flaky heights of slate rock. We are traversing another geological zone. We are gradually losing the pines, too. Within some twenty miles of Deadwood the hills are entirely bare, shorn to supply the great reduction works with fuel. The streams that come tumbling toward us are all of a reddish brown, like liquid clay. They have been interrupted in their course, and this is how they have returned to their beds after a whirl through the great mills and a close contact with gold.

Deadwood, the great mining center of the Hills, lies in the deep gulches of the Whitewood and the Deadwood creeks. It was twice destroyed, once by fire in 1879, when, it is said, a million and a half dollars evaporated in pine smoke; then again in 1883, when abnormal snows and rains sent the mountain streams down the gulches in avalanches; and strange to say, it was both times rebuilt over its original site, with the main street running down the gulch and the cross streets scrambling up the hill sides, over the very ground where the miners of 1876 staked their claims and panned out their gold.



SCENE NEAR DEADWOOD, F. E. & M. V. R. R.

The wild days of the history of Deadwood are included between 1877 and 1885—the days of "excitements," of "hurdy-gurdies" and the hazing of the "tenderfoot,"—for although the town was incorporated as a city in 1880, its mining-camp character only disappeared totally several years after that time. From 1876 to 1877, the pioneers may be said to have fought the grizzly and the elements. The striking feature of Deadwood today is its decorousness, at least its outward decorousness. It is perhaps that of the blazé who has had his fill of the kind of excitement which finds a vent in noise and broils. However that may be, the streets of this town of men, and of men more or less bent on the same pursuit and breathing an atmosphere avowedly intoxicating, are as quiet by night as they are by day. The advent of two railroads, with their narrow gauges to Lead City and Bald Mountain, their spurs up every gulch and to the very dumps of nearly every mine, absorbing all the traffic formerly done by ox-teams, drays, and stages, has cleared the streets of much noise and encumbrance, but also of much local color. In these towns the typical disappears with the lawless.

One is greatly impressed here by the absence, or at least the scarcity, of women. The streets are filled with men of every type, class and condition, including a sprinkling of Chinese—for Deadwood has its Chinatown, a dash of spray from the great wave that broke on the Pacific Coast. This yellow population of about a hundred souls is settled at the far end of the town, in houses of a non-committal exterior, which they have disemboweled and the interior of which they have rearranged to suit their needs. They never interfered with the miners, and consequently have always been well treated. They did some placer mining

PLUMA, NEAR DEADWOOD, S. D.

on claims which had been abandoned for exhausted by the whites, then turned to their other industries, Chinese importations and laundries.

If women are scarce in the streets of Deadwood they are even more so in the hotels. At dinner last night we counted forty men to two women. The types were interesting. The talk was exclusively on one subject. Certain metallic words seemed to detach themselves from different parts of the room, to be caught as by an echo and circulated uninterruptedly like a cough through a silent congregation. Here and there was the well-known gaunt figure in blue overalls, throwing into the small, natural movements of life that overstrength which suggests ponderous tools.

I am impressed with the mighty change a very short time has effected in these Hills, when I compare the present with the very brief past. Here I am, after a delightful journey of a few hours' travel on a splendid railroad, in a palatial car, through an interesting agricultural country, investigating a large number of rich gold and silver mines, which have, since 1877, produced over one hundred million dollars in bullion, and are still producing millions every year, with apparently an inexhaustible supply of ore to continue to draw from. Here are a number of substantial cities of brick and stone buildings, which would show creditably in any cities in the country. In these Hills are thermal springs, which have proven a specific for many diseases, with scenery as beautiful as the world-famous mountains of Switzerland, and a climate unsurpassed in the world,—all attracting thousands of tourists each year, who are entertained in magnificent hotels. And yet the following clipped from a file of

LEAD CITY AND HOMESTAKE MINE.

"Scribner's Magazine" of 1877, one year only after these Hills had been ceded by the Indians to the United States government, shows the impression of a writer at that time, only fifteen years ago. The article is earnestly written, and comes to a conclusion with a paragraph which I here insert, as an indication of how completely astray the mind of even a careful observer may be led: "Summed up briefly the condition of mining affairs in the Black Hills is this: Placer mines all taken up; quartz mines the only resource left. In order to work these, capital, machinery and mills for the crushing of ore must be introduced. Men of wealth will hesitate at sending money into a country so far from railroad communication and about which so little is known. Most of the men now in the Black Hills are laboring men, inexperienced as miners. Their chances for employment, then, are small, and their prospects in quartz mining are even poorer. The average Deadwood mine will just about pay 'grub,' and those that pay good living wages are rare. Seven out of every ten men in the whole region have no money and no means of getting any. I have no hesitation in saying that I think the Black Hills will eventually prove a failure."

It was in the early summer of the year in which this article was written that two California capitalists, George Hurst and J. B. Haggin, sent an expert practical miner into the Hills to make a thorough investigation of the gold district, and use his own discretion in the purchase of claims there. The result of the investigation was the bonding of the "Deadwood" and the "Homestake" mines for $80,000 and $45,000, respectively. A report of the condition of affairs in this gold region brought Mr. Hearst into the Hills. The bargain for the two mines was immediately closed, and in less than two months from the time of the

DeSMET MINES MILL, NEAR CENTRAL CITY.

first investigation, an eighty-stamp mill, costing $100,000, was in operation. The remoteness of the Black Hills from railroad communication does not seem to have been considered an adverse circumstance by the capitalists in question, for after all, if it is true that investments follow railroads the rule works almost equally well the other way. The machinery for this first mill, and much of the material for the Company's narrow-gauge railway extending over some thirteen miles, were manufactured in San Francisco, shipped to Cheyenne, Wyoming, and thence carried by ox-teams over three hundred miles to the mines, the additional cost amounting to more than $30,000. It was not long before the original Homestake Company, of which George Hearst was first president, became consolidated. It now includes the Homestake, Highland, Deadwood, Terra, and De Smet companies. In the "Engineering and Mining Journal" for October 3, 1891, I find the total dividends of these mines to be: Deadwood-Terra, $1,030,000; De Smet, $1,125,000; Homestake, $4,756,750; the Terra having paid $75,000 and the Deadwood $275,000 before consolidation. These ores are reduced in six extensive mills, in which upward of seven hundred stamps pound incessantly. The mines of the Homestake and the Caledonia companies are situated in the same belt. The vein is composed of hydrous mica, chloritic and hornblende schists and quartz, generally enclosed between walls of porphyry and various forms of schists and slates. They are classed as bedded deposits, as distinguished from the more uncertain type of veins. They often exceed a hundred and fifty feet in thickness. The ore is of a low grade, yielding only from two and one-half to ten dollars per ton, but it occurs in inexhaustible quantities and admits of a method of treatment so simple and inexpensive that the profits are enormous. A visit to these mills fills one

CENTRAL CITY, IN DEADWOOD GULCH.

with an overpowering sense of the possibilities of work, and one is bewildered by the statistics which sketch the proportions of such an enterprise.

Bald Mountain, the Ruby Basin district and Carbonate Camp, whose mines have become dividend-paying only within the past few years, were prospected as early as 1876, and their history since the stampede there in 1877 represents a period of experiment and failure. The ore occurs in what is termed blanket veins, from three to one hundred and fifty feet wide, and ranging in value from ten dollars per ton upward into the hundreds. This ore, which could be mined without machinery of any kind, proved absolutely refractory to the simpler methods of treatment. During the twelve years which elapsed between 1877 and the construction of the smelting and chlorination works at Deadwood, mills and smelters were opened and closed, corporations sprung into life and died, according to the varying fortunes of the greater companies which were spending heavy sums in a stubborn effort to make their claims profitable. There were booms and collapses, faith and ridicule, and the history of stocks described the wildest zigzag. The Newberry-Vautin chlorination method solved the difficulty for the Golden Reward of Ruby Basin, proving that the reduction of all Bald Mountain and Ruby Basin ores was practicable.

The Golden Reward Chlorination Works are at present producing bullion at the rate of $33,000 per month. The cost of treatment is less than five dollars per ton for gold alone. As a great many deposits of that district carry silver ranging in value from eight to thirty dollars per ton, it is probable that means will soon be found of saving this silver for a nominal cost. Experiments made at the Dakota School of Mines proved that these same ores

DEADWOOD GULCH, ONE-HALF MILE WEST OF CENTRAL CITY.

might also be reduced by pyritic smelting. The process is at present being tested by the Deadwood & Delaware Company, which erected a plant at Deadwood in July, 1891, at a cost of $250,000.

From Deadwood to Bald Mountain, by the Fremont, Elkhorn & Missouri Valley (narrow gauge) Railroad. Another blue day. This is the twelfth of October and the air is almost balmy. The scenery is full of beauty and even of grandeur at certain points. Our train, which looks like a toy, is running up impossible heights and describing impossible curves, skirting precipices and skimming over trestles, leaving its tracks below in a tangle of loops and bends. A wonderful piece of engineering, the construction of this road, attacking grades of four hundred and thirty feet to the mile, and describing curves of one hundred and fifty feet radius. After an hour's ascension, the heights that close us in seem suddenly to drop away, and we look over an immeasurable expanse of dark blue hills and yellow prairies. Our car is wedged in between ore cars and flat cars. Our fellow passengers consist of a German family, of well-fed rotundity, and a stubby little pigeon-toed Chinese woman, whose wrists are covered with bangles and whose shining chignon is bristling with brass pins. On the flat car behind us is a group of an equally foreign appearance: two middle-aged men, a boy and a young woman. They have strong faces of a pronounced northern type. They do not seem to feel the necessity of conversation. The woman sits with her chin in her hand, her almost colorless gaze fixed on some point in the horizon. The boy holds a puppy in his arms, which he strokes now and then very soberly. The train stops in the midst of what would

DEADWOOD GULCH, ONE MILE WEST OF CENTRAL CITY.

seem a wilderness. They climb down and unload the car with strong agility. They have lumber, a case of window panes, boxes and bags of groceries, bags of utensils and tools, bedding and clothes tied in a horse blanket, and a small stove—an embryo home. The things are heaped on either side of the track, and as the train pulls off they stand amid their household goods, screening their eyes from the sun, and watch us disappear around a curve. As we lose them I feel as though I had peeped into the first chapter of a story and dropped the book by the wayside.

From Bald Mountain we make one of the crossings, and catch the Black Hills & Fort Pierre narrow gauge, which takes us down to Piedmont. This ride is perhaps no less beautiful than the one up Bald Mountain, with all the effects reversed. We spin down grade, and the hills and high masses of rock seem to be climbing over each other and flying from us in a panic. We pass great fields of glistening stubble, stacks of harvested grain of a duller gold, peaceful nooks sheltered by high hills where trim little cabins have been built in the center of cabbage-planted stretches, soft pastures where cows are browsing, then we drop suddenly into a wild cañon, enclosed between great cliffs of limestone full of somberness and echoes. At Piedmont we find our horses, and resuming our drive we come upon Sturgis in the full glow of sunset. Sunset in these hills is an hour of transfiguration. The little towns which we come upon then may have their prosaic side, but they are very apt to carry this halo with them into our memory.

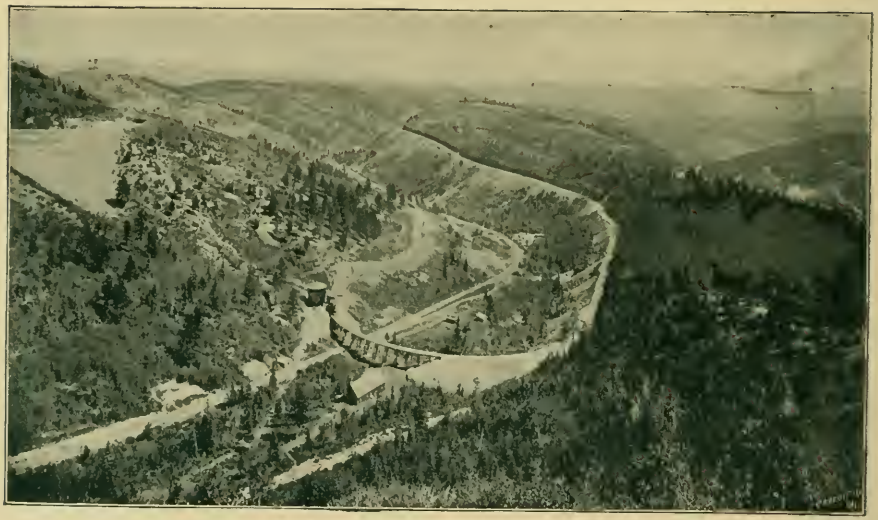
The horizon is of a complex, bewildering order of beauty. If the colors on birds' wings, the varying tints of shells, and the lights that opals catch, could be blended and vaporized,

LOOKING UP FANTAIL GULCH, F. E. & M. V. R. R.

they might produce something of this effect. Sturgis, like a little dreamland town, lies in a valley with a slight inclination toward a creek, that looks like a rainbow lying on the ground. This valley is the Red Valley, the Indian race-course, the great agricultural zone of the Hills. Although this valley completely encircles the Hills, it is not everywhere so fertile as it is in this eastern portion, for the slope of the country being east, all the streams rising in the central and western hills drain these regions on their way to the Cheyenne. Then the heaviest rainfalls also occur here, enabling the farmer to dispense with irrigation to a great extent.

All the winds that blow over the Black Hills have swept the plains for great distances, and bring what moisture they have gathered to these peaks to be condensed into rain. These hills, therefore, manufacture their own climate and manage to keep their vegetation green and fresh when the plains are parched with thirst. Some localities, however, do more condensing work than others, for the contributions vary with the different winds. Those from the north bring little moisture with them from the cold Canadian regions; the cargo of the southern winds is intercepted long before they reach these latitudes, and the Pacific winds, depositing almost all of their moisture in rain and snow along the Rocky Mountains, give the Hills only that which they may have collected on the intervening plains. And so it happens that the eastern winds, sweeping up from the Atlantic and the Gulf of Mexico, in spite of all that they deposit along the Alleghanies and the Mississippi valley, bring the heaviest freight of moisture with them for distribution along these eastern slopes.

The great product of these valleys is wheat. That is, more attention has been given to its cultivation, and Black-Hills wheat grades higher in the market today than that of North-



NEVADA GULCH, LOOKING FROM GREEN MOUNTAIN, F. E. & M. V. R. R.

ern Dakota, Nebraska, Minnesota, or Iowa. But the growth of all small grains is equally luxuriant, and corn, heretofore supposed to require totally different conditions, is now beginning to prove a sure crop. The similitude between the flora of these hills and that of southern Maine and New Hampshire in the same latitude, determined by late scientific explorations, would indicate that the fruits and vegetables of those States must also flourish here. These things will all be verified as soon as agriculturists will have entirely supplanted the farming-miners, brought into the country by the gold, and who turned to land claims only as a makeshift when mining claims were not within reach.

Ascending the foothills that overlook Sturgis, one comes suddenly in view of Bare Butte. Unlike the usual western formation called butte, this particular Indian watchtower is of rock, with evidences of erosion,—what the miners call float. It is difficult to form an idea of a butte if one has never seen any. I fancy that the etymology of the word is French, for these "mounds" occur more frequently throughout that part of the west that was thoroughly explored by French missionaries and voyageurs. A butte is generally a formation of yellowish clay, bare of vegetation and strangely suggestive of a construction, a fortress, or a town of queer roofs huddled together within a stuccoed wall. They are a great relief to the eye and the mind, breaking as they do the horizontal monotony of the plain. There is an indescribable lonesomeness about them—that lonesomeness which gives personality to inanimate things. To the early explorers, the coming upon a butte must have been like the first sight of a caravan to a man who is crossing the desert. Bare Butte, in the golden air of Indian summer, seems translucent. The projections that are licked by the sun are of various tints of golden brown,

FORT MEAD, NEAR STURGIS. OFFICERS' QUARTERS.

COL. E. V. SUMNER, U. S. A., EXERCISING HIS CAVALRY REGIMENT AT FORT MEAD, S. D.

Halted by photographer for a "snap shot" as they emerged from the cañon. COL. SUMNER with hand raised to halt command.

and the shadows of these projections are a deep purple. It lies like a great camel carved out of rough topaz and amethyst, looking over a yellow desert.

It was in the shadow of this butte that the military camp, which eventually became Fort Meade, was located. It was then known as Camp Sturgis, in honor of Lieutenant "Jack" Sturgis, killed at the Custer massacre. The present situation of Fort Meade was determined by General Sheridan in 1876. The site is a superb one, both from a scenic and a strategic standpoint. This ten-company post means much to the little town of Sturgis, and in fact to the whole county in which it is situated. The quantity of supplies consumed by its men and horses is enormous.

Our route to Spearfish takes us along the race-course, through cultivated lands, by thriving farms, well-built farm-houses, fenced fields of the gleaming stubble of oats and timothy. Spearfish was settled by a reflux from Deadwood. A migration of Montana miners passed through this region on their way to Deadwood. Arrived there, they found the placer claims all taken up, and determined to retrace their steps and ranch here in the beautiful valley of the Spearfish Creek. The town is an aggregation of cozy cottages with small orchards and shade trees. No evidences of stampede here. Every house, however small, seems to have been built for a home. It is the site of the State Normal School, which brings in a floating population of young men and women from the surrounding farms, and all points of the Hills, on learning intent.

From Spearfish to "Nigger" Hills, sixteen miles through a dense pine forest, the air is saturated with a resinous smell. By the ups and downs of the road we realize that we are

traveling west, for the great wall of pines never once opens a breach to let us see the horizon and appreciate our ascension. The wind surges through the trees with the mournful monotony of the sea. Within this pine forest is a young forest of oaks, and further up a forest of aspen, leafless now like trees of silver wire, delicate and fragile, shrouding the body of the pines in a haze of vaporous gray.

Bear Gulch, at the foot of Nigger Hill, has a peculiarly wild and desolate aspect. Some ten or twelve log cabins in line along a thin stream constitute the greater part of the Nigger Hill Mining Camp. The camp manages to support itself and hold down its tin claims by some placer work in the gulches. These gulches, now almost exhausted, have yielded much gold. The prospecting for tin was begun here in 1883. Nigger Hill is now covered with prospect holes, belonging for the most part to a Deadwood and New York Company, known as the American Tin Company. With the exception of a few shafts, one of which is one hundred and forty-seven feet deep, with two drifts of sixty feet, there has been nothing done here but surface work. The dumps from every prospect show rich ore, but the developments have not been sufficient to show the nature of the deposits. Capitalists are afraid to invest lest the veins turn out to be pockets, and the miners are afraid to sell for pockets that which might turn out to be veins. A little of this tin has been smelted, and, combined with placer tin from the same locality, has been made into pure shining bars, which have been shipped to various points in the West, and as American tin have attracted no little attention. Since the comparative exhaustion of placer gold, in the seven or eight gulches about Nigger Hill, a carbonate of copper, carrying free gold has been discovered on Mineral Hill, at a distance of

VIEW IN SPEARFISH CANON.

three or four miles from here. Fabulous stories are told of this new strike, and wonderful specimens shown to corroborate them. We dine deliciously on grouse and fresh vegetables at this lonely Bear-Gulch camp, and turn our horses' heads eastward again.

Nothing could be more beautiful than the valley drive between the Spearfish, and the Belle Fourche. It is two hours at least before we strike the rolling stock range. The sun is almost warm, the light intense; there is not a cloud in the sky. The ground is covered with the frizzled buffalo grass, short and thick like a closely-woven mat, the most nutritious grass in the West; and above it the taller, finer grasses rise like a haze. Every now and again we pass one of the beautiful streams where cattle come to water.

The Belle Fourche river, the beautiful fork of the Cheyenne, gives its name to a little town opened on the first of last June, and now a shipping point of no small importance. From June to October, 60,000 head of cattle were taken from here by the Fremont, Elkhorn & Missouri Valley Railroad. This is essentially the cowboy's *pied-a-terre*. With its floating population, it counts some two hundred and fifty souls. Almost half again that many today. This is Fair day, and the ranches within a radius of twenty-five miles have emptied themselves here to witness the races. Ponies are anchored by their hanging bridles in a long line along the row of stores and cabins that form the town. Every imaginable vehicle from sulkies to hay-racks stand outside, tilted forward, with their shafts and poles on the ground. Flaring bills tacked upon every available background proclaim the attractions of the race-course. Besides the usual trotting, pacing and running races, there are to be steer-roping contests, ladies' races, and then as a bouquet a purse of twenty-five dollars for the cowboy who will start his pony,

ON TOP OF BARE BUTTE MOUNTAIN, NEAR STURGIS AND FORT MEAD.

mount, light a cigar, open an umbrella, dismount, mount again and be back at the stand in a given number of minutes. In the parlor of the hotel where we stop for an hour that our horses may be fed, we find numerous other evidences of the fair. The walls are hung with much elaborate fancy work; satin banners painted to represent embroidery, satin banners embroidered to represent painting, all more or less awry on their brass rods, many species of crochet work, and every variant of the tidy. A number of women sit here while their husbands have gone to "hitch." Two girls are talking over the winter's course at the Spearfish Normal School. A small, bony German woman and a ponderous American in sealskin and black plumes are excitedly discussing a conjugal problem which refers to the question, whether milking the cow is the duty of the man or the woman.

Our horses ready, we push on toward Sundance, over miles of stock range. This grass land sweeping off to the horizon in every direction has some of the grandeur of the desert with all the cheerful beauty of fertility. In the summer this is a vast many-colored meadow. Now it is all gold; the frost has gilded it. There is a fascination in looking over the wheels at the ground running from under us, and noticing the infinite variety of grasses that go to make a prairie; the short copper-tinted blades, the greenish-yellow frizzles, the silky meshes with all the lights and shadows of golden hair, the stretches that are like a pale haze powdered with fine seeds. It is like the fascination of looking over the edge of a ship into the blue and green lights of the sea.

The stockman in these parts has indeed little expense and less care. The cattle and horses roam over the range all winter. The grasses which cure into rich hay on the ground

give them a pasture as nutritious in January as it is in June. All that is required of him is that he knows his own stock. "The Black Hills are gold from the grass roots down, but there is still more gold from the grass roots up," is perhaps the wisest remark ever attributed to "California Joe."

As we approach Sundance, a broken line of hills rises along the yellow horizon. The sun is setting without a cloud to catch the colors. The hills assume metallic tints like the blues and greens of verdigris. The west is all of a reddish copper glow, which shoots over the dome of the sky and hangs over the east in a faint pink, so faint that it is like a blush in the air. The disk of the sun is blood red and enormous. A little bunch of horses, startled at our appearance, stop still for a second on the summit of a mound directly in front of us, and stand with flying manes in strange black foreshortenings against the sun. In the pink blush of the east, a star of silver filigree is taking to itself light.

In the heart of the cattle country rises Sundance Mountain, an almost isolated elevation, rock-flanked and level-topped, like a great stage upon which one can fancy the Indians performing their religious dance with the witness of the horizons. In its shadow is the white town of Sundance, evolved out of a road ranch and a saloon as soon as farms began to spring up in the valley and the rising stock industry had begun to sprinkle the range with horses and cattle. It is now an agricultural as well as a stock center.

By virtue of the Hatch Bill, which passed Congress in 1887, Wyoming established five agricultural stations or experimental farms. The last settled was at Sundance, in May, 1891. Forty-nine acres of land were purchased by private subscription and donated to the State Agri-

cultural College. Of these forty-nine acres, forty were devoted to the culture of grain and vegetables, and nine to that of tame grasses. In these few months of experiment, wheat grading No. 1 hard, was produced in abundance, and the average yield of beets was found to be six tons to an acre. The experiments next year will chiefly concern small fruit and forestry. The meteorological record of the farm contains the following data: Altitude of Sundance 4,700 feet; average mean temperature for August 63.05 degrees, rainfall 2.02 inches.

We are here within near sight of the Bear Lodge range, and here Inyan Kara ("the peak which makes stone") stands six hundred feet out of an encircling rim that suggests the throat of a crater. It is so abrupt that it seems perpendicular at some angles. The igneous rocks of which it is composed, like Bare Butte, have all the deep, gorgeous tones of rough jewels. Warren's Peak, the crowning peak of the Bear Lodge range, though some two thousand feet higher, is less prominent for being set in the center of others which diminish gradually and reach the valley by rounded, grass-covered steps.

From these heights one looks out upon an infinite of blue and down upon Mato Tepee, the Bear Lodge which gives its name to the range. Mato Tepee is generally known as the Devil's Tower; for it seems that among the Indians it is more commonly spoken of now as "The Tower of the Bad God." At this distance it looks like an obelisk of basalt on a flat plain. The current hypotheses are in favor of its being the core that was left standing when a cataclysm had torn open some great volcano by the mouth and scattered its flanks, or then of its having been ejected with great violence when in a liquid state, then solidified by sudden cooling. But the geologists who have studied this region believe that the tower was forced

DEVIL'S TOWER, SIXTY MILES NORTHWEST OF SPEARFISH.

up through the sedimentary strata under great pressure, and at such a temperature as to make it plastic rather than fluid; that had it been otherwise, the sedimentary rocks tilted around it would have been more metarmorphosed than they are, by igneous heat. Approaching it from Sundance, it presents a number of varied aspects, according to the different angles from which it is seen. Now a great fluted column, a tall, black, truncated cone; then again a tremendous organ whose pipes shoot out of a hill and converge at the top. It is gray or black or purple, in sympathy with the clouds or the sun, and as one draws nearer, the great pipes seem to pull themselves out indefinitely toward the sky. Standing at its base, one realizes that these columns are triangular or hexagonal crystals of a yellowish drab, delicately tinted with green. They are, as it were, the fibres of the obelisk, and rise over six hundred feet perpendicularly out of a massive base. The entire tower is over eleven hundred feet high from the Belle Fourche, on the bank of which it stands. The hill which forms its pedestal is a mass of huge rocks, parts of the crystals fallen from time to time. The impression produced by this isolated and mysterious structure is one of amazement. It has never been scaled, and adventurous tourists must ever stand hopeless at its base with all of the longing which is bred of prohibition.

From Sundance to Newcastle, October 20. — It is a typical Wyoming day. The sky is of indigo. A moon of then white lace is setting between gauzy swirls of wind clouds. There is a fierceness in the light which strikes blinding flashes from the plowshares, and makes the streams look like hard, polished steel. The land is of every tone and quality of gold, from the metallic glitter of the wheat stubble to the dull haze of the wild grasses upon which

THE HISTORIC "CROW BUTTE," NORTHWEST NEBRASKA, NEAR FORT ROBINSON.

the wind makes little shadow eddies. Bunches of horses with flying manes are herded past us. It is astonishing how long we can see them. Their forms and movements are perfectly distinct when they have dwindled to the size of dogs. Then we lose the motion, they appear to be standing still, then they suddenly seem to shrivel and be dissolved in light.

At the end of some thirty miles, our road begins to climb the side of a densely wooded hill. We go down into ravines, then up again, higher each time, the horizon expanding and sinking around us. At a brusque turn we leave the trees and find ourselves on the top of an immense grassy Mesa, looking out in every direction over a boundless expanse of blue. The impression is startling and wonderful. It is as though we were crossing a great yellow island suddenly emerged from out of a turquoise sea. The fantastic impression lasts for several miles, then we begin the descent, receiving from the edge of the Mesa the first announcement of the Cambria Coal Mines in great columns of black smoke. In a sudden transition from this dreamy height we drop into a cañon with a black atmosphere, where locomotives are whistling and switching, cars being loaded from a chute with a noise as of a hailstorm on a tremendous scale. We pass immense smoke-stacks, coke ovens smoking quietly a thin smoke which hangs over them like mist, substantially built offices, stores, eating-houses, cabins, and cottages, around which children with facial lines comically emphasized by coal dust, run about and play. At the mouth of the cañon we are stopped by the town of New Castle, which surprises us with its resemblance to a miniature metropolis.

Our hundred-mile drive across country from New Castle to Rapid City is a grand epitome of all our previous drives through the Hills. We have scores of miles among ranches,

SYNDICATE PARK LAKE, RAPID CITY, S. D. DR. MCGILLICUDDY IN THE BOAT.

farms, cattle ranges, and as many again over divides, from the height of which we get wonderful panoramas of distant hills and gleaming plains; then down the divides we go, over slopes of rich grass into glens and shad d parks full of grouse and red squirrel. We enter cañons that are lonely and resonant like sea sh lls, then out over grass land, which makes the world seem like a yellow floor under a blue canopy. The horizon is constantly contracting and expanding around us. The sun rises and sets with extravagant splendor for our particular delectation. The towns where we spend the night or through which we drive become mere incidents of the gr at mysterious lif , whose real features are dreamy hills and sunsets.

Somewhere in the last half of this hundred-mile drive we come upon the source of Rapid River, the largest and most impetuous stream of the Hills, and one of the few which carries its waters overground all the way to the Cheyenne. For a considerable distance it sings along quietly enough, picking up the contributions that trickle down side gorges, until its bed begins to tilt and it is sent hurrying down a wild cañon to the valley. As our road climbs over its last divide, we can look down and see it describing shining curves through great flats of grass sprinkled with trees. Here the foothills open a wide gate, and on the very threshold among these shining curves lies the town of Rapid City. No situation could be more favorable for a manufacturing post. Besides the advantages of the Rapid River as a water power, it is placed so as to form a natural channel through which much that the Hills produce in minerals and agriculture must pass and be transformed before it goes out to the plains.

Here are valleys watered by abundant streams, where crops are grown; hills covered with forests of pine to be reduced to lumber and used for building, etc. Here is to be found

CHLORINATION WORKS AT RAPID CITY, S. D.

the best, and in fact, the only clay from which that beautiful cream-colored brick, which has made Milwaukee, Wis., famous, can be manufactured. Recognizing these advantages of natural location, factory interests began to spring up. Two roller flouring mills, which are run by water-power and which make two hundred to two hundred and fifty barrels of flour per day, were built. Also, sawmills, sash, door and blind factory, electric light and power works, bottling works, etc., and what is of great importance, a mill for the reducing of ores by the chlorination process. These chlorination works, completed within a few months, receive the ores from mines above Deadwood, by the Fremont, Elkhorn & Missouri Valley Railroad. They run night and day, reducing one hundred tons of ore per day, and being found totally inadequate to meet the requirements, the works are being enlarged to double their capacity. Even then, they will form only a nucleus of groups of similar mills which must be built to accommodate the enlarged and increasing demand. These works take the ores as they come from the mine, and passing them through the various stages, never release them till the final product is taken from the crucible in the bullion ingots. It is a devious and curious path this ore travels. We see the raw ore dumped from the chute into a funnel which reaches the roaster. We quickly commence descending to follow its course through the din of poundings and crushings, as if a mighty monster were making a meal by crunching rocks. We find our way through dust and heat to a room in which are tubes and belts and beams, and our guide, raising a lid, shows us the pulverized ore which has passed the roaster and is now going through the crushers and trickling down in powdered sand; closing this and descending another stairway, he opens another lid and shows us a series of little tin buckets attached to a leather belt, chasing each other up a long tube, each bucket

KNIFE BLADE ROCK, ON B. H. & FT. P. R. R.

filled with a black powder. We ascend again, stairway after stairway to find this ore, but it has, after reaching the top, been dumped from its little buckets and is off in the iron fingers of this complicated machinery, and we are told, after it has been washed, "separated," returned, etc., it will come into the final room, where what was a whole ton of ore when it started into the mill is now but a little dust in a crucible, and when the heat has farther done its work, the product of this ton of ore can easily be carried away in the vest pocket.

The history of Rapid City in no way differs from that of the other valley towns of the Hills region. We have the same type of pioneers detaching themselves from the ebbing and flowing tide of miners; exploring the valleys in search of a spot upon which to build a home; and with that human aspiration for stability which manages to fraternize with the spirit of migration, taking care that the chosen spot is an advantageous site, that their homes shall become the nucleus of a large settlement. The town is staked out with no more pretentious instruments than a tape-line and a pocket compass. One square mile is divided into lots, the lots are numbered, and the numbers are shuffled in a hat and passed around—and a new town is born. Rapid City is an ambitious, busy little place of 4,000 souls, grinding the wheat from the valleys, shipping the stock and packing the beef from the ranges, manufacturing brick, and supplying the farmers with cash.

Rushville.—We leave the railroad and find our horses here again for a twenty-six mile drive across prairie to the Sioux Agency at Pine Ridge. We are reminded of the Hills only by an occasional bare ridge crested with a bristling fringe of pines which cuts the land into

sections. Between long intervals of prairie, we come upon the stricken-looking farm of a half-breed or a lonely log cabin with the accompanying tepee standing beside it like a reminiscence. An Indian boy, with a half sheet of cotton thrown around him in lieu of a blanket, goes by on his pony herding some three or four bony steers. At a little distance, as he kicks his pony into a run and sits with outspread arms yelping to his herd, one might take him for a diminutive Moor, with a flying bournous. After awhile the log cabins give way to board cabins, then further on these are grouped together in a manner somewhat suggestive of a frontier military post. This is the Agency. The agent's offices are in a low frame building, with benches in front of it, where blanketed forms congregate for a lounge, a gossip, a smoke, or a redress of grievances. Here the agent sits at his desk for eight hours out of twelve, and listens to complaints of all sorts, from the most tragic to the most trivial. He listens to an old man whose son has returned from Carlyle with an education so admirably calculated to open his eyes to the condition of his race and its need of civilization, that after lounging for some time in the paternal tepee, drawing his rations and meditating upon life, he finds that his "heart is bad," wanders off to a lonely spot and shoots himself. He listens to a squaw whose steer is sick, to an old chief who has a one-acre farm, and thinks that the great father should furnish him with a "riding plow," which might in a measure mitigate the hardships of a life of labor. An endless litany of miseries and absurdities, the daily rehearsal of a tragic-farce.

This morning there is a great stir in the waiting room adjoining the office. Indians are pouring in and forming animated groups about the room. We learn that our visit coin-

cides with that of a senatorial commission. We discover friends among the commissioners, and find that we shall have the pleasure of attending a council. The thought of this council somehow brings to my mind the great meeting that was held some sixteen years ago, on Chadron Creek, not far from here, when the question of purchasing the Black Hills was first submitted to the Sioux. These plains never witnessed, I fancy, anything more impressively splendid. It was in the latter part of September, on one of those blue days of Indian summer, when the land seems to radiate light. The commissioners had erected a tent under a great cottonwood tree near the creek. From under this canopy they looked out upon a vast yellow prairie, saturated with sunshine, a great wave broken by Crow Butte, that stands out on the prairie like a Bedouin ruin on an African plain. A small company of cavalry, consisting of some sixty or seventy men, who had come merely to lend dignity to the occasion, were drawn up in line in the rear of the tent, and there they waited. The Indians were late in coming. The commissioners began to believe that they were again to be the victims of a willful misunderstanding, and would again retire without having accomplished anything. At last, over a curve of the prairie, apparently out of the light of the air, came a great confused mass which broke into color and sound as it advanced. Some four thousand Sioux, divided in platoons, brilliant with all their savage paraphernalia of war, eagle feathers and buffalo heads, were bearing down upon the council ground on a dead run, waving their rifles in the air and singing their war song. When they had come within a few hundred yards of the tent, the entire band reined up in line, fired a volley, and then proceeded to describe mad circles around the tent, yelping and firing without interruption. Great numbers on foot reinforced the horse-

SIOUX INDIANS AT ROSEBUD.

men, and also surrounded the tent. There were soon over seven thousand Sioux on the grounds, whirling in a vortex at once dazzling and deafening. Suddenly the whole thing stopped as with a jerk, the Indians dismounted and took their positions before the tent in concentric circles, a great splotch of intense color on the dull plain; a splotch of color quivering with ill will, and reckless with a sense of power. The commissioners were afraid to open the council. Then out of the distance, as it happens in fairy tales and in nightmares, came a pattering sound, which brought with it two horsemen; two naked men mounted upon ponies with a strip of red wool thrown across their backs in lieu of saddles. The smaller of the two men jumped from his horse, pushed through the ranks of the assembly, and planted himself in the center of the council ground. This was Little-Big-Man. The Indians say that he was a small man, but that his voice was like thunder, and that those whom it fell upon in anger were blighted and scorched like the pines in a storm. He was not a Sioux. He had come from the North, from the Big-Horn country, with a word for the Sioux. In the north, there, they had caught wind of this council; they knew what a council and a treaty amounted to; so he had taken his pony and come all the way to tell the Sioux not to give up their Hills at any price, but rather to turn upon the handful of white men whom they had among them, and put an end to the question by killing them on the spot. This address was not immediately translated to the commissioners, so that the stir which followed was only half intelligible. The Indians rose with their guns in hand. Out of the crowd came "Young-Man-Afraid-of-his-Horses." His soldiers surrounded the tent. The commissioners felt that it was all over with them. "Young-Man-Afraid-of-his-Horses" mounted his pony, stretched out

his arm, and told the Indians to go back to their camp until they were better prepared to transact business. His words seemed very few, but they fell on the excitement like a fine point on the tense film of a bubble. In an instant the seven thousand Indians had disappeared like a flight of wild birds.

This was only sixteen years ago. This morning thirty or forty men are seated on benches around the wall of a low meeting room. Along the floor their moccasined feet, pointed in and out look, like pieces of Roman mosaic. But for these feet one might forget that these are Indians. They have made it a point to come to the council in citizens' clothes. There is here and there a suggestion of the army in the way of an old cavalry coat and a fatigue jacket. As a study of misfits, it is interesting. It is something beyond the merely too-large or too-small of another man's clothes. It is a reminder of the difference in proportions and form between the race for whom these clothes were made and the one which wears them. The coats are all too long-waisted and too sloping in the shoulders; the trousers are almost all too short.

Most of the prominent chiefs are here. Blue Horse, He Dog, Big Roads, Spotted Elk, and every imaginable variety of bear and wolf. They each keep the floor as long as they are permitted to do so, apparently enjoying the splendid tones of their language. The pith of all these speeches is identical. They begin with a retrospective glance over treaties that have been violated, and promises unfulfilled; they touch upon their poverty, enumerate their needs, which range from an enclosure of the reservation within a barb-wire fence to the distribution of spring wagons among the chiefs, and invariably ending with a eulogy of the

present agent. It is a formal repetition of the daily scene in the agent's office. There is little earnestness and even little emphasis in the tone of all this. It is something of a splendid-sounding soliloquy, in which a serious skepticism is strangely mingled with the whining of a humored beggar. The long pipe is passed from hand to hand, and grunts of approbation from all along the line greet any reference made in a general way to the unreliability of most commissioners and the neglect of the great father. The commissioners take a few notes, renew old promises, and make new ones, and the council is over. The Indians are pleased to have heard themselves talk. It may be six months or a year before they have the pleasure of saying all these things over again, with as much formality.

We have seen the Omaha. — The true name of this dance is the "grass dance." Its origin dates back to an incident in the history of the Indians of the lower Missouri. It was during one of those protracted tribal wars. Both armies were encamped on the grass flats of the river. The Crows, if I am not mistaken, conceived the stratagem of rising in the night, tying grasses around themselves until they looked like sheaves, and then making their way in a squatting posture along the treeless plain to the enemy's camp. The enemy were either asleep, or they saw nothing in the swaying of the grasses that struck them as unusual. The Crows accordingly fell upon their foes, and massacred them, and there, among the dead, and still representing sheaves, they improvised a dance, so spirited, so beautiful according to their conception of beauty that it has been transmitted from tribe to tribe. The Sioux called it the Omaha after the tribe from which they received it. It has been permitted

to survive the sun-dance because it is unaccompanied by physical tortures, but in the minds of the educated Indians, its moral influence is far worse. They contend that it stirs the savage in their nature, and that there lies much coarseness concealed from us under its grace and picturesqueness.

The Omaha house in which the dance is to be celebrated is an octagonal log house, some fifty feet in diameter. It is situated about five miles out of the Agency. We start after moon-rise. The night is clear and white, the air deliciously cool without being sharp. We have an escort of Indian police riding on either side of us like phantoms. We go swiftly and noiselessly over the prairie, as though we were driving over a well-kempt lawn. There is a group of buttes in the distance, lighted in white from behind, touched with silver along the top, and casting a great black shadow clearly defined on the ground. It has the air of a lonely Moorish town of white domes and minarets. Some lights are moving about from tepee to tepee, forming queer constellations. The tepees themselves, lighted from within, glow like night-lamps of fine porcelain. The Omaha house is pouring out of the opening in its roof a column of yellow sparks. As we draw near we find the building surrounded by a large crowd of women, many of whom are draped in white sheets, which cover their heads and are drawn up over their mouths with a decidedly oriental effect. The shorter ones are looking in between the cracks with their faces flattened against the logs; the taller ones lean over their shoulders or crane their necks to strike the level of a higher crack. From within, one sees an unbroken line of eager black eyes along the open space between the logs. In the center of the house is a roaring log fire, which finds a glimmering reflection in all

these eyes. The musicians are stationed in a corner. The orchestral instrument consists of a large drum, suspended from sticks that are driven in the ground so as to insure the greatest possible amount of vibration. Twelve men sit around it, and beat time to a spirited motif in a minor key, which is repeated without the slightest variation during the entire entertainment. The dancers are nude but for their breech cloths, and here one comes to a full realization of the injustice of the modern dress to these superb bronze bodies. They are brilliantly painted in reds, yellows and blacks, the yellows being singularly effective. Their heads are bristling with eagle feathers variously tinted. Their ears are pierced all along the rim with as many as ten or twelve holes, from each of which hangs a silver ring and a pendant. Anything in the way of a long-beaded tab, or a war bonnet, with great streamers of eagle feathers, is attached at the back of the waist, a reminiscence of the grasses of the lower Missouri, no doubt, and trails on the ground, emphasizing those movements of the dance which are entirely from the hips. At their knees and their ankles are strings of sleigh bells, which form something of a self-acting tambourine accompaniment. A tin clothes-boiler and several covered pots stand around the fire. In the clothes boiler a fatted dog is simmering quietly. Every now and then the tin lid trembles with a faint sound of a cymbal, and from under the edges come fumes as of animal decay made more sickening by being heated. There is also a large box of hard-tack, which is the agent's contribution to the entertainment.

We are the only guests admitted into the house. As soon as we have taken our places, one of the musicians thumps the drum, then all twelve start in unison with a wild yelp on a high note in a minor key. The rhythm is marked by the most vigorous thump-

ing, and the dancers spring to their feet. My attention is particularly attracted to a very old Indian, the most conspicuously bedecked and by no means the least spirited of the dancers. His dancing consists chiefly of a prancing "sur place," like a race horse before the signal for starting is given. He is tall and gaunt, with a face like the antique mask of tragedy, painted a deep red. His lips move in a incessant muttering, and when he breaks into a yelp his expression is singularly savage. The interpreter tells me that he is Iron Hawk, and that he played an important part in the Custer massacre. The Indians, usually reticent, it seems, in their references to that event, have frequently spoken of his splendid "boast," made on the battlefield strewn with the unfortunates of the Seventh. He could be heard, they say, within a radius of a mile, as he walked about among the dead and recounted his experience of the day.

As soon as the dancers stop to take breath, the yelping and thumping grow louder and faster, urging them on into a frenzy. Their muscles become tense, drawn along their thighs and under their knees like cords. Their yelps become more and more strident, they prance and quiver, until the musicians finally call a halt of their own accord. Then some squat along the walls and resume their pipes, and others throw themselves down in superb reclining poses, resting on their elbows and screening their faces from the fire with their curved hand.

From the reclining group a figure rises suddenly and begins to pace the length of the building, turning on his heel with the swaying movement of a lion in a cage. After the first turn or two, he begins his soliloquy, punctuated by light taps of the drum. The tones of this Sioux language are wonderfully impressive. It has the full vowel sounds of the old

Spanish, all the strength of its gutturals, and much of the pompous grandeur of its inflections. This particular "boast" must refer to great achievements, if we are to judge of it by the grunts of both musicians and dancers, and the twinkling along the line of black eyes peeping in between the logs.

The soliloquy finished, the music begins with redoubled violence. The dance now takes the form of a pantomime, something that seems to express adoration, ecstasy, and which would do well as an expression of sun- or fire-worship. It is all directed to the clothes boiler, where the dog is cooking, and means in this case that the choice morsel is done to a turn. Tin cups are distributed among the guests and the dancers; but the atmosphere, warm and heavy with tobacco smoke, sweat-melted paint, and the fumes from the boiling dog, has become unendurable, and we are glad to get out into the fresh night.

The moon is directly overhead. The Moorish town of white domes and minarets is drenched with light. Our escort of phantom horsemen is again with us. Our wheels and our horses' hoofs are inaudible. We lose the last sounds of the Omaha house and become submerged in that peculiar stillness which is of the plains and the desert. The whole world seems wrapped in a vaporous white dream.

It is a dazzling day; the sky is pale with light. We stand on a little open pavilion outside of a large corral where steers are pawing the ground. The "beef issue" is to begin at twelve. It is now five minutes of twelve, and there is not an Indian to be seen anywhere. On the platform, beside us, stands the agent, with a memorandum book containing the names

BEEF ISSUE TO INDIANS AT PINE RIDGE, S. D.

of each representative of the family, or group of twenty-four, which the Government entitles to a steer every fortnight. Beside him is the interpreter, and next to the interpreter stands "Grass," his stout figure closely buttoned in an old cavalry coat which sweeps the ground. There is not another Indian on the agency whose voice can carry a name so far into the distance as his can. At about three minutes of twelve the prairie is streaked with approaching flights of ponies. Not only the representative but most of the masculine members of the family, or group of twenty-four, are here. The squaws follow at a distance in wagons. The men form a line extending about half a mile from either side of the corral chute. They wear their best today. Not their citizens' clothes, but what might be called the dress of the transition epoch; buckskins and flannel shirts or cloth trousers and beadwork jackets, slouch hats decorated with beadwork bands, or no hats at all, only a feather held erect by a band of bright-colored cloth. There are a number of boys, too, in flowing white shirts, sitting their ponies bare-back. "Grass" steps to the front of the pavilion and acts as the agent's mouthpiece in proclaiming various things: That the children have not been attending school as they should; that the Indians are requested to chase the steers far out in the prairie before they begin to shoot. Then the name of the Indian to whom the first steer belongs is shouted by Grass in stentorian tones. The chute is opened, a steer comes running down between a double row of horsemen. The man whose name has been called, and as many of his kinsmen as happen to be present, lift their rifles and spur their ponies in pursuit. The steers come down the chute in quick succession, and Grass rattles off the names with all the might of his extraordinary lungs. Every now and then a steer takes a diagonal course and rushes,

horns down, into the crowd; then follows a kaleidoscopic shifting of forms and colors, accompanied by shrieks and laughter, until he is safely headed towards the open prairie. When the last steer has passed down the chute, and the play in the foreground is over, the flat distance of the prairie is the scene of a queer chase. In this marvelous atmosphere, whatever is at all visible is strangely distinct. Horsemen and steers are running about in the clear distance like marionets or mechanical toys. Men an inch high are firing tiny guns, and the report which reaches us is fainter than the vibration from a tuning fork. At last, as the steers fall, the skurrying little figures resolve themselves into groups and the prairie is dotted with color. The wagons go out to them, and the squaws begin their work of skinning and disemboweling while the men sit around and smoke.

This is all that is left of the Buffalo hunt, and even this is doomed. Pine Ridge and Rosebud are the only two agencies in the country where the beef is still issued "on the hoof," as they say, and the days of this custom are numbered here.

It seems well to devote our last evening at Pine Ridge to a visit to Red Cloud. We start out at sunset, and walk a mile over a short-bladed, copper-colored field, which glows with the red and yellow of a thousand little flames. There is a thin sprinkling of tepees over the brilliant ground. To the east is a long line of clayey buttes, which catch the light as water or clouds do, or like those Moorish structures of stucco, which the sunset tints with the melting pink and violet tones of fresco. Bands of over-grown Indian girls flock past us, pursued by young braves. The girls are almost all dressed in red, the youths wrapped in white. The girls shriek, laugh, zigzag like swallows, but their pursuers come upon them swift as antelopes.

Red Cloud has several guests this evening; four or five old Indians smoking their pipes and treating him to their conversation. The principal room of the frame cabin is hung with American flags, gifts received at Washington, prized, I fancy, as pieces of color and works of art, rather than symbols. We find him dressed in citizen's clothes, sitting on the edge of his bed, his blind eyes covered with convex blue glasses. The room is choking with a smell of medicinal herbs. We exchange a few platitudes through the medium of the interpreter. We hope that he may soon recover his sight, he hopes that there may never be any more Indian troubles. The old chief has a fine face, whose nobility is emphasized by that impassiveness peculiar to the blind. We slip a quarter into his hand, which he accepts without reluctance or eagerness, and leave him to the conversation of his cronies. It is not unlikely that chiefdom as an institution will die with him; so, historically speaking, this ill-smelling little cabin has some of the significance of a royal death-chamber.

October twenty-ninth. — It is a chilly twilight. We have left the Hills far behind us. Our train is streaking eastward through the farms of Nebraska. Our fellow travelers are for the most part farmers, conversational and self-congratulatory. Beyond the car window the land lies in gentle undulations, which now and again stiffen into a straight line, rimmed with red along the horizon. Here we find the tumbleweed again, the little lace-like bush with weak roots, which the lightest wind dances over the ground like a puff of smoke, forever taking root and being uprooted, curious prototype of the migratory spirit of the Great West.

The tourist who goes to the Black Hills with a limited space of time to dispose of, who cannot manage to climb Harney's Peak or wander about at leisure through the wonderful cañons of the granite region, and still would like to have an idea of the general configuration of these mountains and enjoy their characteristic beauties in a condensed form, as it were, could not better satisfy himself than by taking a trip on one of the marvelous narrow-gauge routes which, starting from Deadwood and Lead City, take one far into the mountains, through the most picturesque scenery of the Hills. Mountains often hide their beauties as they do their treasures, and but for these narrow-gauges, which seem to attack any grade and which fear no curves, all of that which constitutes wild and impressive scenery, dark gulches and sonorous cañons, would remain unknown to the great majority of travelers. But through them everything is accessible. They turn like a snake at the head of a gulch, run up perpendicular heights, down precipitous inclines, and skirt the mountain side where there scarcely seems to be a foothold.

There are two of these scenic routes in the Hills: the Fremont, Elkhorn & Missouri Valley system, and the Black Hills & Fort Pierre. The first-mentioned of these was constructed in 1891, for the purpose of bringing down the ore from the active mines to Deadwood, the commercial center of the mining district of the Black Hills. Its first line starts up Deadwood gulch and follows the south slope of the mountain to the head of the gulch; there it crosses on a trestle, and still climbing, attacks the north slope of the opposite mountain. On reaching the divide between Deadwood and Nevada gulches, it rounds the point to Fantail gulch, runs up to its head, then loops around the mountain and turns into the Ruby

Basin District at the head of Whitetail Creek. The Portland line of the same system branches off at the "summit divide," between Deadwood and Nevada Gulches. It skirts the south side of Bald Mountain, climbs between Bald and Green Mountains, past the Mark Twain Mine, and over to the plateau where is situated the rather famous "Portland Mine," for which, several years ago, the machinery was hauled in wagons all the way from Pierre, a distance of two hundred and twenty-five miles.

From this height the view is as imposing as it is from any point in the Hills. On the way up to it, one looks down into deep gulches or across them to the mountain sides that form their walls—walls which are sometimes precipitous and rocky, and sometimes curving slopes of shrubbery and wild flowers. Every curve shifts the scene, shows another face of the mountain, and the puzzle of tracing the tracks below, of connecting horse-shoes and loops, becomes more and more intricate. One leans out and looks down with the feeling of being suspended in mid-air. After an hour's climb, the whole foreground begins to sink. Through an occasional break comes a glimpse of blue, or the symmetrical top of a distant peak, then at some sudden turn the entire horizon shows itself like an immense panorama.

From this outlook one can see almost all the great landmarks of the Hills: to the west the dark mass of the Bear Lodge Mountains; Twin Buttes, Deer's Ears and Bare Butte, although more than a hundred miles away, rise distinctly out of the great plains which extend straight on as far as the eye can reach, and meet the sky at the line of the horizon. On the south-east is Custer's Peak, which alone obstructs the view of Mount Harney and Terry's Peak, second in height among all the peaks of the Hills.

The Black Hills & Fort Pierre Railroad starts from Lead City and takes one through some thirty miles of wild and beautiful scenery to Piedmont, where it intersects the Fremont, Elkhorn & Missouri Valley Railroad. The Elk Creek Cañon, into which it plunges shortly after this intersection, leaves an impression which is worthy of Colorado. The road belongs to the owners of the Homestake mines at Lead City, and was originally built for the purpose of handling the wood required by the mines for fuel and braces. Almost all the materials for the construction of this wonderful little road, including its engines and cars, were brought by wagon from Sidney, three hundred miles.

Let nobody go to the Black Hills without devoting a day to these mountain routes. For those who are called there by business interests, there could be no easier holiday, no more delightful form of mental rest.

Hardly a score of years has passed since the vast empire of agricultural and mineral wealth embraced in the northern portion of Nebraska, and that portion of South Dakota in which the Black Hills are located, was virtually an unknown wilderness. It is a little more than a decade since the muddy waters of the Missouri marked the northwestern boundary of civilization, and the journey into the wilderness beyond was fraught with difficulties and dangers that would have disheartened a less fearless race than were the pioneers to whose persistency and enterprise we are indebted for the development that has made the region referred to one of the most favored that the sun shines upon. The vast prairies, the home of the Indian and the buffalo, were, to the white man, an unknown country, where the markings of the

trail were bleaching bones that mutely told of the fate that had befallen many a caravan that had been overpowered by the hostile tribes; the remnants of which are now the nation's docile wards; delighting in the luxury of an existence which does not entail the penalty that would follow a literal application of the divine law: "By the sweat of thy brow shalt thou eat bread." But, that the reward of the courage and zeal of the pioneers who first overcame the countless difficulties and reached the goal, was commensurate with the perils that were encountered at every turn, is demonstrated by the acres of golden grain, the countless flocks and herds, and the thrifty homes that now dot the landscape and bespeak the prosperity of the husbandman, as well as by the thriving cities and the bustling mining camps peopled by the toilers who wrest from the rock-ribbed hills the mineral wealth that has made the Black Hills famous the world over.

BOUDOIR CAR.

The journey from Chicago to the Hills, that a few years ago was the hazardous labor of months, and fraught with untold hardships

BUFFET CAR.

and difficulties, is now accomplished with the speed, ease and security incident to that enterprising management of American railways, which has made them the marvel of the entire world. The laborious trail, with its trains of "Prairie Schooners," has been replaced by the highway of glistening steel and luxurious palace cars, in which the traveler is conveyed from the World's Fair City across Illinois, Iowa, and through northern Nebraska to the Black Hills, with a speed that is rivalled only by the wind that transforms the prairies with their wealth of waving grain into a billowy sea of gold.

The North-Western Line, one branch of which extends from Chicago to the Black Hills, was the pioneer in introducing railway facilities to this favored region, in the development of which it has been a most important factor; providing an outlet for the products of the mines and prairies, and keeping pace with the development of the country, it is conceded to be

one of the leading railways of the world. It is not only the direct and popular route between Chicago and the Black Hills, but it reaches nearly every important business center in Northern Illinois, Iowa, Wisconsin, Northern Michigan, Minnesota, North Dakota, South Dakota and Wyoming, and by a close traffic alliance with the Union Pacific System, its patrons are enabled to make the journey from Chicago to Denver, Portland, Ogden, Salt Lake and San Francisco, and the numerous intermediate cities, in trains providing through car accommodations, and every convenience and luxury incident to an equipment of the highest order of excellence.

To be brief, the North-Western Line provides the highest order of facilities for a safe, quick and comfortable journey from Chicago to the region described in the foregoing pages, and full information that will prove of great assistance in arranging the details for a trip to "The Wonderful Black Hills" will be cheerfully furnished by any representative of the North-Western Line.

W. A. THRALL,
General Passenger and Ticket Agent,
Chicago & Northwestern Railway,
CHICAGO, ILL.

J. R. BUCHANAN,
General Passenger Agent,
Fremont, Elkhorn & Missouri Valley R. R.,
OMAHA, NEB.

THE NEW EVANS, HOT SPRINGS, S. D.

APPENDIX.

No book which pretends to give a correct impression of a growing western town can escape an appendix; for a growing western town does not stand still, even while the printers are putting its merits in type.

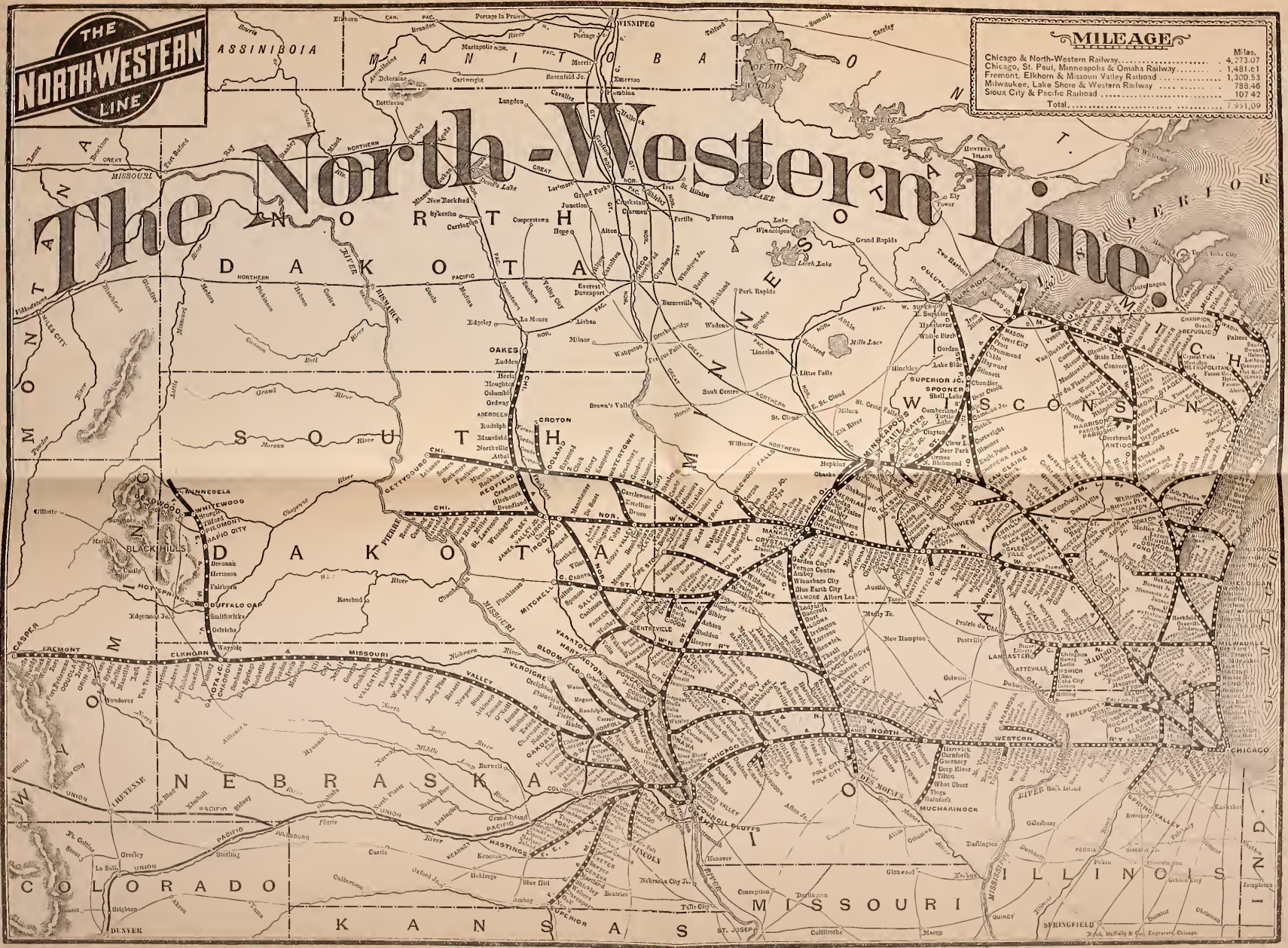
When this little book was written Hot Springs was already famous throughout many States of the Northwest for the wonderful cures accomplished there. There were few towns of Nebraska, Dakota or Iowa that had not sent its sufferers there and gotten them back transformed. Since then, however, its growth has been remarkable. Its development as a town shows itself in public buildings, stores and business blocks, while increasing popularity as a pleasure and health resort manifests itself in new hotels, boarding houses and numerous cottages. "The Evans," erected on the site of the Minnekahta, which was destroyed some months ago by fire, is a building which would do honor to any of the famous watering places in the country. It is a massive structure, 126 feet square and five stories high, built of the hard pink sandstone that is found in such quantities all through this southern portion of the Hills. It is capable of accommodating about three hundred guests. Its piazzas are spacious, shaded by a sloping roof, which makes of them great open-air living rooms by day and smoking rooms, promenade halls, or hop rooms in the evening.

Annexed to the hotel is a bath-house, containing fifty bath-rooms, constructed after the most approved designs, offering every luxury and furnished with a competent corps of attendants.

The springs known as the Catholicon, which though apparently less commodious than the other sanitariums, were always liberally patronized on account of the wonderful cures that have been effected there, have recently been purchased by a syndicate, who are now constructing a large bath-house, are repairing and enlarging their hotel, and are about to build a new hotel on the high grounds just above the Catholicon Springs. This hotel will be completed and ready for occupancy by May 1, 1893. Other improvements will be made on the same property, and will greatly add to the attractions which the Hot Springs will furnish next year.

Hotels at Hot Springs.

Names.	Rooms.	Rates per Day.	Rates per Week.
The Evans	184	$2.50 to $4.00	$12.50 to $25.00
Hot Springs House	65	2.00	10.00 to 14.00
Gillespie	60	2.00 to 3.00	8.00 to 18.00
Parrott	39	1.50 to 2.00	7.00 to 14.00
Catholicon	44	1.50 to 2.00	7.00 to 16.00


THE NORTH-WESTERN LINE
The North-Western Line.
MILEAGE
Chicago & North-Western Railway ..... Miles. 4,273.07
Chicago, St. Paul, Minneapolis & Omaha Railway 1,481.61
Fremont, Elkhorn & Missouri Valley Railroad 1,300.53
Milwaukee, Lake Shore & Western Railway 788.46
Sioux City & Pacific Railroad 107.42
Total 7,951.09
ASSINIBOIA
MANITOBA
ONTARIO
MINNESOTA
NORTH DAKOTA
SOUTH DAKOTA
MONTANA
WYOMING
NEBRASKA
COLORADO
KANSAS
IOWA
MISSOURI
ILLINOIS
WISCONSIN
MICHIGAN
SUPERIOR
WINNIPEG
CHICAGO
DENVER
ST. JOSEPH
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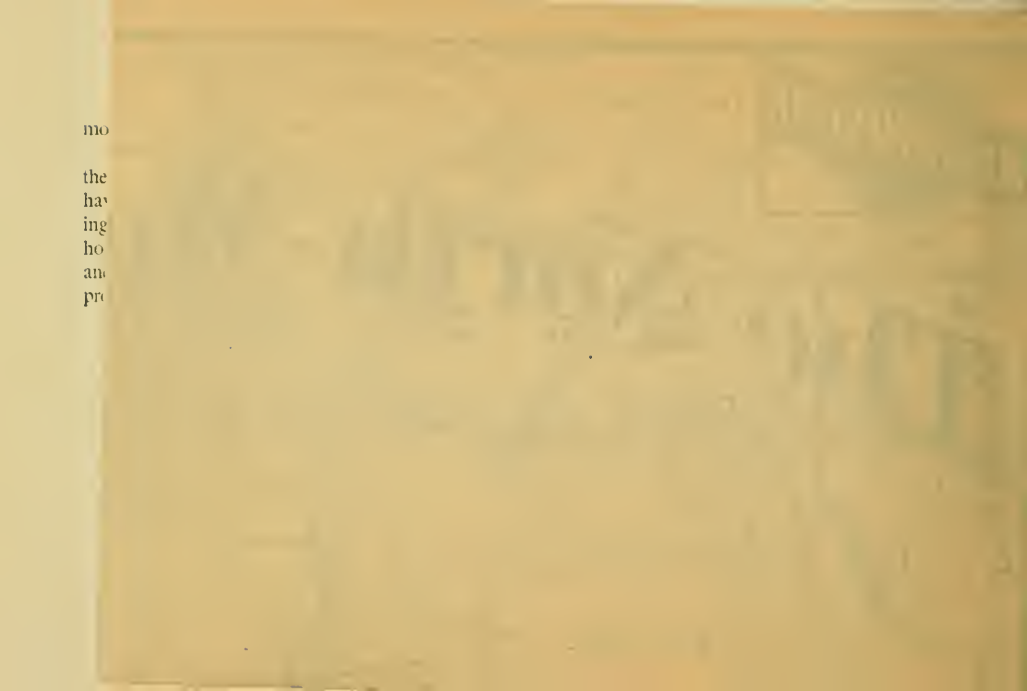

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